AMENDMENTS TO CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-17 (Cancelled)

18. (Currently Amended) A variable frequency oscillator, comprising:

a temperature compensation input node;

a frequency control input node;

a resonant circuit including:

a first tunable sub-circuit responsive to said temperature compensation input node for modifying the resonant frequency of said resonant circuit;

a second tunable sub-circuit responsive to said frequency control input node for modifying the resonant frequency of said resonant circuit;

wherein in normal use, said first tunable sub-circuit continuously responds to said ~~frequency control~~ temperature compensation input node to compensate for resonant drifts in said resonant circuit due to temperature variations while said ~~resonant~~ second tunable sub-circuit continuously responds to varying frequency modification signals at said frequency control input node;

a temperature compensation circuit coupled to said temperature compensation input, and effective for continuously producing a temperature compensation signal in accordance with temperature variations, said temperature compensation circuit including:

a plurality of first modules each effective for producing a respective first signal directly proportional to temperature;

a plurality of second modules each effective for producing a respective second signal inversely proportional to temperature;

a first summing node for summing all of said first and second signals and producing a resultant summed signal.

19. (Original) The variable frequency oscillator of claim 18, wherein:

the strength of each first signal of said plurality of first modules is individually selectable; and

the strength of each second signal of said plurality of second modules is individually selectable.

20. (Original) The variable frequency oscillator of claim 18, wherein:

each of said plurality of first modules has an optionally assigned first temperature offset, wherein each of said plurality of first modules is precluded from outputting its respective first signal for temperatures below its respectively assigned first temperature offset.

21. (Original) The variable frequency oscillator of claim 18, wherein each of said plurality of second modules has an optionally assigned second temperature offset, wherein each of said plurality of second modules is precluded from outputting its respective second signal for temperatures below its respectively assigned second temperature offset.

22. (Original) The variable frequency oscillator of claim 18, wherein:

each of said plurality of first modules has an optionally assigned first temperature offset, wherein each of said plurality of first modules is precluded from outputting its respective first signal for temperatures below its respectively assigned first temperature offset; and

each of said plurality of second modules has an optionally assigned second temperature offset, wherein each of said plurality of second modules is precluded from outputting its respective second signal for temperatures below its respectively assigned second temperature offset.

23. (Original) The variable frequency oscillator of claim 18, wherein each of said plurality of first modules and each of said plurality of second modules includes a first CTAT signal source.

24. (Original) The variable frequency oscillator of claim 23, wherein at least one of said plurality of first modules further includes:

a CTAT signal source;

a PTAT signal source;

a second summing node for creating a difference signal based on the difference in signal magnitude of said CTAT signal source and said PTAT signal source; and

a first dependent signal generator for producing an intermediate signal dependent on said difference signal.

25. (Original) The variable frequency oscillator of claim 24, wherein said dependent signal generator produces said intermediate signal only if said difference signal is above a predetermined threshold value.

26. (Original) The variable frequency oscillator of claim 24, wherein said difference signal is a measure of a temperature offset, wherein said at least one of said plurality of first modules produces substantially no signal for temperatures below said temperature offset.

27. (Original) The variable frequency oscillator of claim 24, wherein:

for temperatures lower than a predefined transition temperature the magnitude of said CTAT signal source is greater than said PTAT signal source; and

for temperatures higher than said predefined transition temperature the magnitude of said PTAT signal source is greater than said CTAT signal source.

28. (Currently Amended) An electronic device including the ~~temperature compensation circuit~~ variable frequency oscillator of claim 18.

29-46 (Cancelled)

47. (Previously Presented) A variable frequency oscillator comprising:

a first inverter and a second inverter forming a cross-coupled network defined by having the output of said first inverter coupled to the input of said second inverter and having the output of said second inverter coupled to the input of said first inverter;

a resonant circuit including:

a resonator;

a first tunable sub-circuit responsive to a temperature compensation input node for modifying the resonant frequency of said resonant circuit in accordance with temperature variations;

a second tunable sub-circuit responsive to a frequency control input node for modifying the resonant frequency of said resonant circuit;

wherein said resonator, first tunable sub-circuit, and said second tunable sub-circuit are connected in parallel;

wherein said resonant circuit is coupled in parallel to said cross-coupled network;

wherein said temperature compensation input node is effective for receiving a temperature compensation signal independent of said a frequency control input node receiving a frequency control signal; and

a temperature compensation circuit for continuously producing said temperature compensation signal in accordance with temperature variations, wherein said temperature compensation circuit includes:

a plurality of first modules each effective for producing a respective first signal directly proportional to temperature;

a plurality of second modules each effective for producing a respective second signal inversely proportional to temperature;

a first summing node for summing all of said first and second signals and producing a resultant summed signal.

48. (Original) The variable frequency oscillator of claim 47, wherein:

the strength of each first signal of said plurality of first modules is individually selectable; and

the strength of each second signal of said plurality of second modules is individually selectable.

49. (Original) The variable frequency oscillator of claim 47, wherein:

each of said plurality of first modules has an optionally assigned first temperature offset, wherein each of said plurality of first modules is precluded from outputting its respective first signal for temperatures below its respectively assigned first temperature offset.

50. (Original) The variable frequency oscillator of claim 47, wherein each of said plurality of second modules has an optionally assigned second temperature offset, wherein each of said plurality of second modules is precluded from outputting its respective second signal for temperatures below its respectively assigned second temperature offset.

51. (Original) The variable frequency oscillator of claim 47, wherein:

each of said plurality of first modules has an optionally assigned first temperature offset, wherein each of said plurality of first modules is precluded from outputting its respective first signal for temperatures below its respectively assigned first temperature offset; and

each of said plurality of second modules has an optionally assigned second temperature offset, wherein each of said plurality of second modules is precluded from outputting its respective second signal for temperatures below its respectively assigned second temperature offset.

52. (Original) The variable frequency oscillator of claim 47, wherein each of said plurality of first modules and each of said plurality of second modules includes a first CTAT signal source.

53. (Original) The variable frequency oscillator of claim 52, wherein at least one of said plurality of first modules further includes:

a CTAT signal source;

a PTAT signal source;

a second summing node for creating a difference signal based on the difference in signal magnitude of said CTAT signal source and said PTAT signal source; and

a first dependent signal generator for producing an intermediate signal dependent on said difference signal.

54. (Original) The variable frequency oscillator of claim 53, wherein said dependent signal generator produces said intermediate signal only if said difference signal is above a predetermined threshold value.

55. (Original) The variable frequency oscillator of claim 53, wherein said difference signal is a measure of a temperature offset, wherein said at least one of said plurality of first modules produces substantially no signal for temperatures below said temperature offset.

56. (Original) The variable frequency oscillator of claim 53, wherein:

for temperatures lower than a predefined transition temperature the magnitude of said CTAT signal source is greater than said PTAT signal source; and

for temperatures higher than said predefined transition temperature the magnitude of said PTAT signal source is greater than said CTAT signal source.

57. (Currently Amended) An electronic device including the variable frequency oscillator ~~temperature compensation circuit~~ of claim 47.

58-71 (Cancelled)

72. (Currently Amended) A variable frequency oscillator, comprising:

~~an~~ a gain stage;

a phase shift stage;

a resonant circuit, said resonant circuit including:

a resonator module; and

a plurality of tunable sub-circuits, each being coupled in parallel to said resonator module, and being responsive to a corresponding frequency control input;

wherein at least one of said plurality of tunable sub-circuits is ~~response~~ responsive to a temperature compensation input effective for receiving a temperature compensation signal independent of the remaining of said plurality of tunable circuits; and

a temperature compensation circuit for continuously producing said temperature compensation signal in accordance with temperature variations, wherein said temperature compensation circuit includes:

a plurality of first modules each effective for producing a respective first signal directly proportional to temperature;

a plurality of second modules each effective for producing a respective second signal inversely proportional to temperature;

a first summing node for summing all of said first and second signals and producing a resultant summed signal.

73. (Original) The variable frequency oscillator of claim 72, wherein:

the strength of each first signal of said plurality of first modules is individually selectable; and

the strength of each second signal of said plurality of second modules is individually selectable.

74. (Original) The variable frequency oscillator of claim 72, wherein:

each of said plurality of first modules has an optionally assigned first temperature offset, wherein each of said plurality of first modules is precluded from outputting its respective first signal for temperatures below its respectively assigned first temperature offset.

75. (Original) The variable frequency oscillator of claim 72, wherein each of said plurality of second modules has an optionally assigned second temperature offset, wherein each of said plurality of second modules is precluded from outputting its respective second signal for temperatures below its respectively assigned second temperature offset.

76. (Original) The variable frequency oscillator of claim 72, wherein:

each of said plurality of first modules has an optionally assigned first temperature offset, wherein each of said plurality of first modules is precluded from outputting its respective first signal for temperatures below its respectively assigned first temperature offset; and

each of said plurality of second modules has an optionally assigned second temperature offset, wherein each of said plurality of second modules is precluded from outputting its respective second signal for temperatures below its respectively assigned second temperature offset.

77. (Original) The variable frequency oscillator of claim 72, wherein each of said plurality of first modules and each of said plurality of second modules includes a first CTAT signal source.

78. (Original) The variable frequency oscillator of claim 77, wherein at least one of said plurality of first modules further includes:

a CTAT signal source;

a PTAT signal source;

a second summing node for creating a difference signal based on the difference in signal magnitude of said CTAT signal source and said PTAT signal source; and

a first dependent signal generator for producing an intermediate signal dependent on said difference signal.

79. (Original) The variable frequency oscillator of claim 78, wherein said dependent signal generator produces said intermediate signal only if said difference signal is above a predetermined threshold value.

80. (Original) The variable frequency oscillator of claim 78, wherein said difference signal is a measure of a temperature offset, wherein said at least one of said plurality of first modules produces substantially no signal for temperatures below said temperature offset.

81. (Original) The variable frequency oscillator of claim 78, wherein:

for temperatures lower than a predefined transition temperature the magnitude of said CTAT signal source is greater than said PTAT signal source; and

for temperatures higher than said predefined transition temperature the magnitude of said PTAT signal source is greater than said CTAT signal source.

82. (Currently Amended) An electronic device including the ~~temperature compensation circuit~~ variable frequency oscillator of claim 72.